



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,813	08/19/2003	Kouji Oohara	SIC-03-024	1812
29863	7590	02/06/2008	EXAMINER	
DELAND LAW OFFICE			PARRIES, DRUM	
P.O. BOX 69			ART UNIT	PAPER NUMBER
KLAMATH RIVER, CA 96050-0069			2836	
			MAIL DATE	DELIVERY MODE
			02/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/604,813	OOHARA, KOUJI
	Examiner	Art Unit
	Dru M. Parries	2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 December 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 28-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 28-48 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

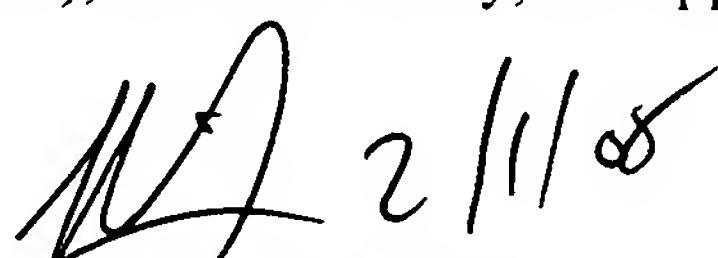
Response to Arguments

1. In view of the Appeal Brief filed on December 5, 2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE), Michael Sherry, has approved of reopening prosecution by signing below:



2/11/08

MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2000

2. Applicant's arguments filed December 5, 2007 have been fully considered but they are not persuasive. Regarding the use of composite signals, Spencer's system (Fig. 2) teaches all power and control signals flowing out of controller (21). The need for power and control signals to each electrical component is real. In regards to the backlight of Spencer's display (31), the wire(s) going from the controller (21) to the display has both control and power signals on it.

Power signals to power the display and the backlight, and control signals to control what is read on the display. Also, every other component in Spencer's bicycle needs both control and power signals passed to them, and even if some components didn't in a particular embodiment, it would be obvious to use composite signals throughout (via just one wire), so that in the case where a component that doesn't need both power and control signals is replaced by one that does, the composite wire is already installed and ready to work with the newly added component. Also, even if a component is used that only uses a power signal, Schwaller's power stabilizing circuit is implemented, to stabilize the power and "destroy" the useless control signal, if there is one. Lastly, composite signals/wires have the ability to carry both power and control signals, but don't necessarily have to, so having composite signals throughout would add to the versatility of the system.

3. Regarding claim 39, Spencer does teach a speed indicating signal sent to the gear shift driving component. As stated above, and in conjunction with the Admitted Prior Art reference, both power and control signals (i.e. a composite signal) are sent to the gear shift driving component and the speed indicating signal is the control signal that controls the gear changer to change gears.

4. Regarding claims 40 and 41, Spencer teaches basic ideas (i.e. a speed indicating signal; a display) but doesn't explicitly teach the details of these ideas, therefore one of ordinary skill in the art would be *motivated* to search for an explicit teaching regarding the broad ideas of Spencer.

5. Applicant's arguments with respect to claims 40, 41 and 48 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 28-32, 34-39, 42-46, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer et al. (6,047,230), Schwaller (5,247,430), and Prior Art (Admission).

Spencer teaches a bicycle control apparatus comprising a programmed power/control circuit (21) including a CPU, that receives power from a power supply (30) and outputs power and control signals to all other parts of the bicycle including a plurality of bicycle components (23-29, 31-33, etc.), such as a first bicycle component, display (31) or a gear shift driving component that drives a gear shift mechanism having a plurality of gear ratios (29, 32, 33; speed indicating signal).

Spencer fails to explicitly teach a second electrical component, a power stabilizing circuit, and exactly what type of supply is powering the bicycle apparatus. Schwaller teaches a bicycle control apparatus comprising a power stabilizing circuit (1) that receives a signal that includes power and outputs a stable output power to a second electrical component (lights, V_L , R_L) via pulsed signal that has ON and OFF components (Fig. 4; Col. 3, lines 31-36). He also teaches the stabilizing circuit having a capacitor coupled in parallel with the second electrical component (Fig. 2). He goes on to teach power being derived from AC (G) and DC (battery, 8; Fig. 4) sources, wherein the AC source is being provided from a dynamo hub mounted on the front wheel of the bicycle (Col. 9, lines 12-14; Fig. 12). It would have been obvious to one of ordinary skill in the art at the time of the invention to implement Schwaller's headlights and

power stabilizing circuit into Spencer's invention to allow the user to use the bicycle at night and subsequently to supply the correct amount of power to the headlights of the bicycle, so that the headlights don't blowout due to overvoltage. It also would have been obvious to one of ordinary skill in the art at the time of the invention to use Schwaller's AC and DC power sources to supply power to the system since Spencer was silent as to the type of source used and Schwaller teaches sources known to work in the bicycle art.

Spencer fails to explicitly teach the power/control circuit's signals being combined to provide one composite signal having the power and control signals together and also a first electrical component comprising a CPU. Admission teaches the technology for communicating both power and control signals using composite signals (first sentence of [0003]). It would have been obvious to one of ordinary skill in the art at the time of the invention to use composite signals throughout the bicycle system to reduce the number of wires used around the bicycle and/or add more versatility to the bicycle by having the ability to send both power and control signals on the same wire. It is also obvious to only stabilize the power signal to the second electrical components (i.e. lights), since doing so would destroy the control signal being sent, which is necessary for the first electrical component's functionality. Also, due to the combination of references, it would be necessary for the first electrical components to have a CPU that receives the composite signal from the power/control circuit and processes the composite signal and deciphers the control signal portion of the composite signal and in turn control the respective electrical component accordingly.

8. Claims 33 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer et al. (6,047,230), Schwaller (5,247,430), and Prior Art (Admission) as applied to claims 28, 32,

and 44-46 above, and further in view of Gohda (4,609,982). Spencer, Schwaller and Admission teach a bicycle control apparatus as described above. Spencer fails to teach a diode for preventing reverse current. Gohda teaches a stabilizing circuit having a diode (D1) coupled to prevent reverse current to the power circuit (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to add a blocking diode in the stabilizing circuit of the combination Spencer invention to prevent reverse current from flowing back into the power/control circuit.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer et al. (6,047,230), Schwaller (5,247,430), and Prior Art (Admission) as applied to claims 28 and 39 above, and further in view of Tomita (JP 07-229909 A). Spencer, Schwaller and Admission teach a bicycle control apparatus as described above. Spencer fails to explicitly teach how the power/control circuit derives the speed-indicating signal. Tomita teaches a speedometer, which consists of a waveform shaping circuit, inside the controller, that displays the running speed of a bicycle based on the output of an alternating current generator (Abstract) (i.e. the hub dynamo of Schwaller), and based on the speed detected derives the speed indicating signal in Spencer's invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement this circuit into the combination Spencer invention since the Spencer invention was silent as to how the speed indicating signal is derived and Tomita teaches a method known in the art that would allow for accurate control of the gear shift driving component via his speedometer and waveform shaping circuit.

10. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer et al. (6,047,230), Schwaller (5,247,430), and Prior Art (Admission) as applied to claim 28 above, and

further in view of Turner (2002/0014366). Spencer, Schwaller and Admission teach a bicycle control apparatus as described above. Spencer fails to explicitly teach the type of display (31) being used. Turner teaches an LCD component (186) to display various data, and a second electrical component being the backlight of the LCD display. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the display being an LCD display with a backlight since Spencer was silent as to the type of display and Turner teaches a display that is known in the art that will allow the rider to use the bicycle and see the display at night, due to the backlight.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The

examiner can normally be reached on M-Th from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

1-23-2008


MICHAEL SHERRY
SUPPLEMENTAL PATENT EXAMINER
TELEPHONE NUMBER 571-272-2084
FAX NUMBER 571-273-8300